

Work Order ID 147556

Thursday, June 09, 2016 8:54:05 AM

147556

Page 1

Item ID: D3637-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bracket Assembly
Start Date: 5/31/2016 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 6/8/2016 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: MUS Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: **JUN 13 2016** SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3637	Rev B								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	0.07							
FLOW CNC Waterjet	1-Cut as per Dwg D3637 Dwg Rev: <u>B</u> Prog Rev: <u>B</u> 2- Debur if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.01							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.01							
Quality Control									

AUG 16 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : _____			

Work Order ID 147556

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Page 2

Item ID: D3637-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bracket Assembly

Start Date: 5/31/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 6/8/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

130

Brake NC

Brake NC

NC BRAKE

Memo

Form as per Dwg D3637

0.04

0.04

DAS
30
9-89

6

SEP 07 2016

140

140

Small Fab

Small Fab

Small Fab

Memo

1- drill holes as per dwg using DT89792-C'Sink as per Dwg D3637 3-
Install Nut plate as per Dwg D3637

0.00

0.09

DAS
30
9-89

6x

SEP 07 2016

150

150

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.01

DAS
38
9-89

6

SEP 07 2016

DQA:

Date: 2016-10-7



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: SEP 28 2015

Work Order update only ☐

Work Order: <u>147556</u> Part No. <u>D3437-041</u> NCR No. <u>16-6051</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Small Fab ☒ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐							
Date: <u>16-09-07-13</u>		Step #: <u>130</u>		QTY Effective: <u>1</u>			MRB (QSI042) Approval DAS 9 9-89 16-09-14				
Description Work Order Deviation				Disposition				Completed By DAS 30 9-89 SEP 07 2016			
When drill hole parts moved in the jig hole off-set Poor jig				Scrap - destroy no replace				Lead hand / Supervisor Approval Verification DAS 30 9-89 SEP 07 2016			
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☒ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☒ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐				FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☒ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☐ Heat Treat ☐ Cut Too Short ☐ Misabeled ☐ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐						OTHER :	

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Page 3

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

Identify as per dwg & Stock Location: St 238A

0.00

160

Packaging

Memo

0.01

Packaging

SEP 07 2016

DAS
6
9-89

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.07

Quality Control

DAS
21
9-89

SEP 08 2016

DAS
21
9-89

SEP 07 2016

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause		FAULT CATEGORY									
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

Picklist Print

Thursday, June 09, 2016 8:54:09 AM

Page 1

Work Order ID: 147556

147556

Parent Item: D3637-041

D3637-041

Parent Item Name: Bracket Assembly

Start Date: 5/31/2016

Required Date: 6/8/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 07-07-20 JLM Verified By:EC
IPP Rev:B change to REV.B as per dwg 08-02-11 DD verified by:ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M304S14GA		Purchased	No			140	sf	26.6084	0.09	0.378947			
-----------	--	-----------	----	--	--	-----	----	---------	------	----------	--	--	--

M304S14GA

304SS sheet .080

**

26.16/08/15

Location	Loc Qty	Loc Code
----------	---------	----------

MAT019	11.5	
--------	------	--

M129972	11.5	
---------	------	--

TPI	15.108421	
-----	-----------	--

M134604	15.108421	
---------	-----------	--

MS20426AD3-3		Purchased	No			100	Each	1,645.000	2	8			
--------------	--	-----------	----	--	--	-----	------	-----------	---	---	--	--	--

MS20426AD3-3

RIVET

**

DAS
30
9-89

SEP 07 2016

Location	Loc Qty	Loc Code
----------	---------	----------

GA	698	
----	-----	--

M131624	698	
---------	-----	--

ST312	947	
-------	-----	--

M131624	947	
---------	-----	--

MS21059L4		Purchased	No			140	Each	38.0000	1	4			
-----------	--	-----------	----	--	--	-----	------	---------	---	---	--	--	--

MS21059L4

Nutplate

**

DAS
30
9-89

SEP 07 2016

Location	Loc Qty	Loc Code
----------	---------	----------

ST301	38	
-------	----	--

m133483	4	
---------	---	--

m134474	9	
---------	---	--

m134962	25	
---------	----	--

M135133

5

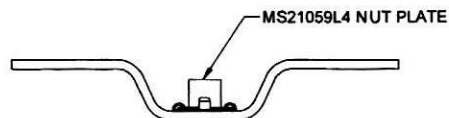
DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

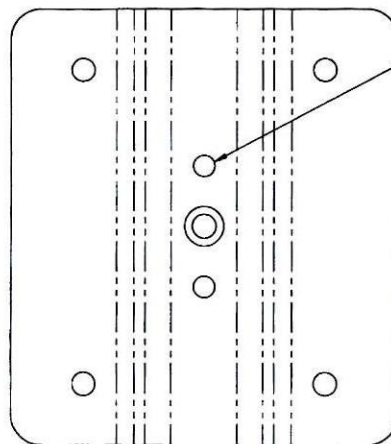
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

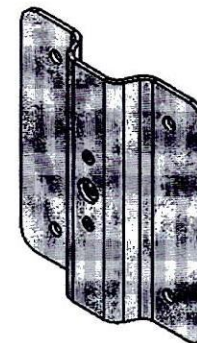


MS21059L4 NUT PLATE



MS20426AD3-3 RIVET
(2 PLACES)

D3637-1 BRACKET



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 147556 MJS
160613

D3637-041 BRACKET ASSEMBLY
(WAS GENEVA P/N G10602-1)

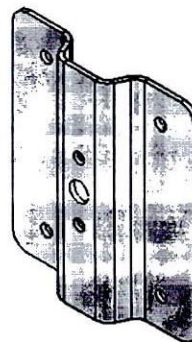
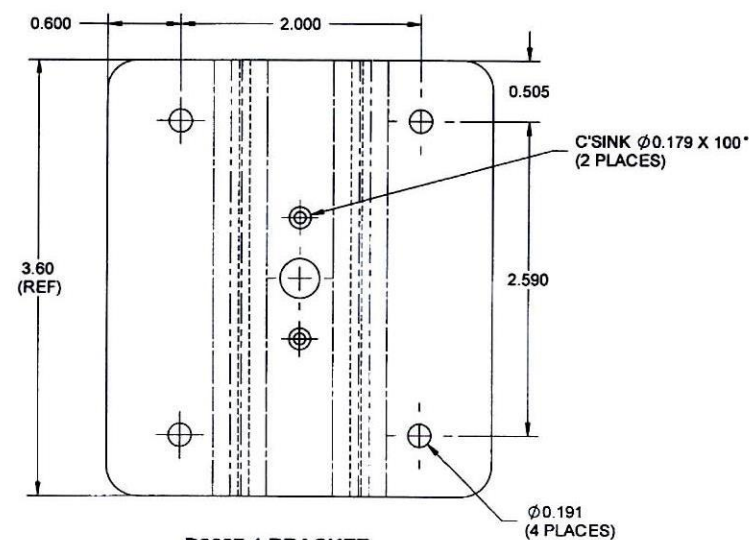
D3637-041 PARTS:

QTY	P/N	DESCRIPTION
X	D3637-041	BRACKET ASSEMBLY
1	D3637-1	BRACKET
1	MS21059L4	NUTPLATE
2	MS20426AD3-3	RIVET

D3637-041 NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: N/A
- 4) UNITS: N/A
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3637-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.27 lbs

B	FOR D3637-1, 1 15 WAS 1.30 & "REF" REMOVED FROM ANGLE	LE	07.12.18
A	NEW ISSUE; REPLACES G10608, G10602 & G10609	LE	07.07.27
REV.	DESCRIPTION	BY	DATE
DESIGN	TS		
DRAWN	LE		
CHECKED	EP		
MFG. APPR.	EP		
APPROVED	EP		
DE APPR.	EP		
DATE	07.12.18		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3637 TITLE BRACKET REV. B SHEET 1 OF 3 SCALE 1:1 COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

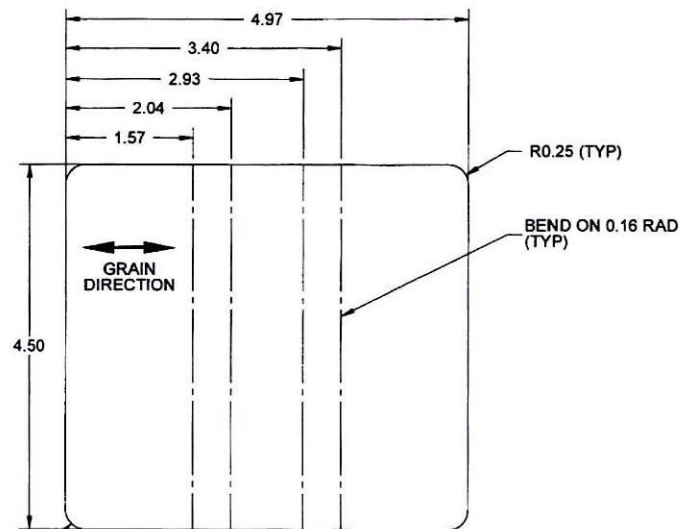


7) WEIGHT: 0.26 lbs

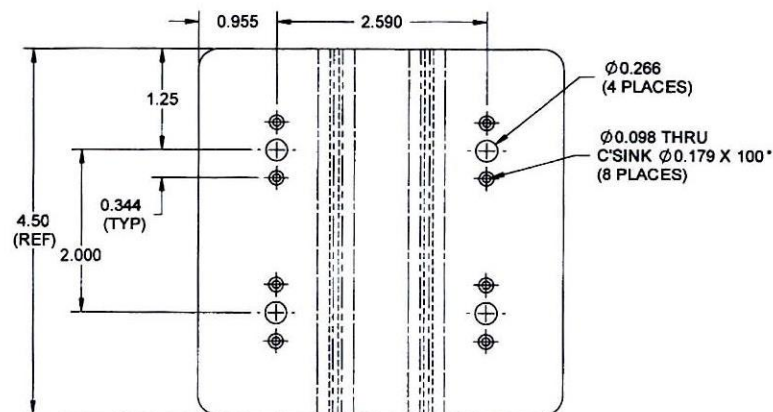
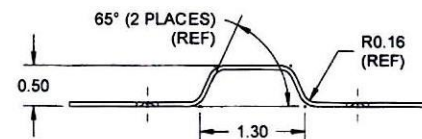
D3637-1 BRACKET
(WAS GENEVA P/N G10608-1)

08-02-05

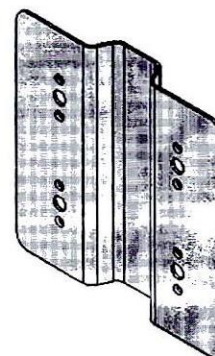
DESIGN	JS	DART AEROSPACE LTD	
DRAWN	JE	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JE	DRAWING NO.	REV. 1
MFG. APPR.	JE	D3637	SHEET 2 OF 2
APPROVED	JE	TITLE	SCALE
DE APPR.	JE	BRACKET	1:
DATE	07.12.18	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	



D3637-3F FLAT PATTERN



**D3637-3 BRACKET
(WAS GENEVA P/N G10609-1)**



D3637-3 NOTES:

- 1) MATERIAL: 2024-T3 ALUMINUM 0.050 THICK PER QQ-A-250/4 OR AMS 4037 (REF DART SPEC M2024T3S.050)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3637-3" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.32 lbs

DESIGN	TS	DART AEROSPACE LTD	
DRAWN	LE	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PE	DRAWING NO.	REV. B
MFG. APPR.	MD	D3637	SHEET 3 OF 3
APPROVED	MD	TITLE	SCALE
DE APPR.	MD	BRACKET	2:3
DATE	07.12.18	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
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